WEST Search History

[redacted]

DATE: Wednesday, January 26, 2005

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT; PLUR=YES; OP=ADJ	
☐	L7	l1 and (wssii or ssii)	26
☐	L6	L3 and (cosuppress$ or co-suppress$)	166
☐	L5	L3 and (down regulate or anti-sense or antisense)	303
☐	L4	L3 and starch [clm]	150
☐	L3	L2 and wheat	361
☐	L2	L1 and (cdna or coding region or gene)	452
☐	L1	starch synthase	469

END OF SEARCH HISTORY

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
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NEWS	6	DEC 01	LISA now available on STN
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NEWS	8	DEC 15	MEDLINE update schedule for December 2004
NEWS	9	DEC 17	ELCOM reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	10	DEC 17	COMPUAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	11	DEC 17	SOLIDSTATE reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	12	DEC 17	CERAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	13	DEC 17	THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15	DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16	JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17	JAN 26	CA/CAPLUS - Expanded patent coverage to include the Russian Agency for Patents and Trademarks (ROSPATENT)

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FILE 'HOME' ENTERED AT 17:09:47 ON 26 JAN 2005

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=> file agricola caplus biosis
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'AGRICOLA' ENTERED AT 17:09:57 ON 26 JAN 2005

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=> s starch synthase ii or ssii
L1          204 STARCH SYNTHASE II OR SSII

=> s l1 and (gene or cdna or coding region)
L2           96 L1 AND (GENE OR CDNA OR CODING REGION)

=> dup reml2
ENTER REMOVE, IDENTIFY, ONLY, OR (?):rem l2
'REM L8' IS NOT VALID HERE
Enter "REMOVE" to identify and remove duplicate answers.
Enter "IDENTIFY" to identify duplicate answers in the answer set.
Enter "ONLY" to identify and create an answer set containing only
duplicate records.
ENTER REMOVE, IDENTIFY, ONLY, OR (?):l2
'L8' IS NOT VALID HERE
Enter "REMOVE" to identify and remove duplicate answers.
Enter "IDENTIFY" to identify duplicate answers in the answer set.
Enter "ONLY" to identify and create an answer set containing only
duplicate records.
ENTER REMOVE, IDENTIFY, ONLY, OR (?):?
Enter "REMOVE" to identify and remove duplicate answers.
Enter "IDENTIFY" to identify duplicate answers in the answer set.
Enter "ONLY" to identify and create an answer set containing only
duplicate records.
ENTER REMOVE, IDENTIFY, ONLY, OR (?):dup rem l2
'DUP REM L8' IS NOT VALID HERE
Enter "REMOVE" to identify and remove duplicate answers.
Enter "IDENTIFY" to identify duplicate answers in the answer set.
Enter "ONLY" to identify and create an answer set containing only
duplicate records.
ENTER REMOVE, IDENTIFY, ONLY, OR (?):remove
ENTER L# LIST OR (END):l2
'REML2' IS NOT VALID.  VALID FILE NAMES ARE 'AGRICOLA, CAPLUS, BIOSIS'
You have entered a file name of duplicates to keep that is not
referenced by any of the L#s specified for this DUPLICATE command.
The file names of duplicates that can be kept are listed above.
Please enter one of these file names.

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           58 DUP REM L2 (38 DUPLICATES REMOVED)

=> d 1-10 ti

L3   ANSWER 1 OF 58  CAPLUS  COPYRIGHT 2005 ACS on STN
TI   Wheat with altered branching enzyme activity and starch and starch
     containing products derived thereform

L3   ANSWER 2 OF 58  CAPLUS  COPYRIGHT 2005 ACS on STN
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TI Diurnal changes in the transcriptome encoding enzymes of starch metabolism provide evidence for both transcriptional and posttranscriptional regulation of starch metabolism in Arabidopsis leaves

L3 ANSWER 3 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
TI Characterization of starch synthase I and II expressed in early developing seeds of kidney bean (Phaseolus vulgaris L.)

L3 ANSWER 4 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
TI Molecular cloning and expression analysis of three genes encoding **starch synthase II** in rice

L3 ANSWER 5 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3
TI Molecular characterization demonstrates that the Zea mays **gene** sugary2 codes for the starch synthase isoform SSIIa.

L3 ANSWER 6 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
TI Cloning and analysis of WF146 protease, a novel thermophilic subtilisin-like protease with four inserted surface loops

L3 ANSWER 7 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Occurrence of multiple forms for **starch synthase II** isozyme in developing seeds of kidney bean

L3 ANSWER 8 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI A comprehensive expression analysis of the starch synthase **gene** family in rice (Oryza sativa L.)

L3 ANSWER 9 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Chromosomal localization of three somatostatin genes in zebrafish. Evidence that the [Pro2]-somatostatin-14 isoform and cortistatin are encoded by orthologous genes

L3 ANSWER 10 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
TI Protein and **cDNA** sequences of corn **gene** dull1 coding for a starch synthase and use

=> d 1 ab

L3 ANSWER 1 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
AB Wheat having a reduced level of SBEIIa activity, that may have a relative high amylose content. Wheat having a mutant SBEIIa **gene** in the A genome. The wheat might addnl. have reduced levels of SBEIIb activity. The wheat grain of this invention can be of a non-shrunken phenotype despite a lesion in the amylopectin synthesis pathway, and may also have a high relative amylose content.

=> d so

L3 ANSWER 1 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
SO PCT Int. Appl., 132 pp.
CODEN: PIXXD2

=> d pi

L3 ANSWER 1 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2005001098 A1 20050106 WO 2004-AU901 20040630
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

=> d 2 ab

L3 ANSWER 2 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
AB To gain insight into the synthesis and functions of enzymes of starch metabolism in leaves of Arabidopsis L. Heynth, Affymetrix microarrays were used to analyze the transcriptome throughout the diurnal cycle. Under the conditions employed, transitory leaf starch is degraded progressively during a 12-h dark period, and then accumulates during the following 12-h light period. Transcripts encoding enzymes of starch synthesis changed relatively little in amount over 24 h except for two starch synthases, granule bound starch synthase and **starch synthase II**, which increased appreciably during the transition from dark to light. The increase in RNA encoding granule-bound starch synthase may reflect the extensive destruction of starch granules in the dark. Transcripts encoding several enzymes putatively involved in starch breakdown showed a coordinated decline in the dark followed by rapid accumulation in the light. Despite marked changes in their transcript levels, the amts. of some enzymes of starch metabolism do not change appreciably through the diurnal cycle. Posttranscriptional regulation is essential in the maintenance of amts. of enzymes and the control of their activities in vivo. Even though the relationships between transcript levels, enzyme activity, and diurnal metabolism of starch metabolism are complex, the presence of some distinctive diurnal patterns of transcripts for enzymes known to be involved in starch metabolism facilitates the identification of other proteins that may participate in this process.

=> d 2 so

L3 ANSWER 2 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
SO Plant Physiology (2004), 136(1), 2687-2699
CODEN: PLPHAY; ISSN: 0032-0889

=> d 3 ab

L3 ANSWER 3 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AB Plant starch synthase (SS) contributes to the elongation of glucan chains during starch biosynthesis and hence plays an essential role in determining the fine structure of amylopectin. To elucidate the role of SS activity in the formation of amylopectin in kidney bean (Phaseolus vulgaris L.), a study was undertaken to isolate **cDNA** clones for SS and to characterize the enzymic properties of the coded recombinant enzymes. Two SS cDNAs, designated pvss1 and pvss21, which were isolated from early developing seeds, encoded SSI and **SSII** (designated PvSSI and PvSSII-1) that displayed significant identity (more than 65%) with other SSI and **SSII** members, resp. RNA gel blot anal. indicated that both transcripts accumulate in leaves and developing seeds at the early stage. Immunoblot anal. with antisera raised against both recombinant

proteins (rPvSSI and rPvSSII-1) showed that the accumulation of both proteins parallels the **gene** expression profiles, although both were detectable only in starch-granule fractions. Recombinant enzymes expressed by Escherichia coli cells showed distinct chain-length specificities for the extension of glucan chains. Our results suggest that these SS isoenzymes for synthesis of transitory starch are also responsible for synthesis of storage starch in early developing seeds of kidney bean.

=> d 3 so

L3 ANSWER 3 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
SO Bioscience, Biotechnology, and Biochemistry (2004), 68(9), 1949-1960
CODEN: BBBIEJ; ISSN: 0916-8451

=> d 4 ab

L3 ANSWER 4 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
AB Three starch synthase (SS) genes, OsSSII-1, OsSSII-2 and OsSSII-3, were identified in rice (Oryza sativa L.) and localized to chromosomes 10, 2 and 6, resp. The three OsSSII full-length cDNAs were cloned, and the predicted amino acid sequences were found to share 52-73% similarity with other members of the plant **SSII** family. The SS activity of each OsSSII was confirmed by expression and enzyme activity assay in Escherichia coli. Expression profile anal. revealed that OsSSII-1 was expressed in endosperms, leaves and roots; OsSSII-2 was mainly expressed in leaves, while OsSSII-3 was mainly expressed in endosperms. Similar to the OsSSI proteins, the OsSSII-2 and OsSSII-3 proteins were found in the soluble as well as the starch-granule-bound fractions in rice. The roles of the OsSSII proteins in starch biosynthesis in rice and the evolutionary relationships of the genes encoding monocotyledonous and dicotyledonous class-II SS enzymes are discussed.

=> d 3 so

L3 ANSWER 3 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
SO Bioscience, Biotechnology, and Biochemistry (2004), 68(9), 1949-1960
CODEN: BBBIEJ; ISSN: 0916-8451

=> d 4 so

L3 ANSWER 4 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
SO Planta (2004), 218(6), 1062-1070
CODEN: PLANAB; ISSN: 0032-0935

=> d 5 ab

L3 ANSWER 5 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3
AB Mutations in the maize **gene** sugary2 (su2) affect starch structure and its resultant physiochemical properties in useful ways, although the **gene** has not been characterized previously at the molecular level. This study tested the hypothesis that su2 codes for starch synthase IIa (SSIIa). Two independent mutations of the su2 locus, su2-2279 and su2-5178, were identified in a Mutator-active maize population. The nucleotide sequence of the genomic locus that codes for SSIIa was compared between wild type plants and those homozygous for

either novel mutation. Plants bearing su2-2279 invariably contained a Mutator transposon in exon 3 of the SSIIa **gene**, and su2-5178 mutants always contained a small retrotransposon-like insertion in exon 10. Six allelic su2- mutations conditioned loss or reduction in abundance of the SSIIa protein detected by immunoblot. These data indicate that su2 codes for SSIIa and that deficiency in this isoform is ultimately responsible for the altered physiochemical properties of su2- mutant starches. A specific starch synthase isoform among several identified in soluble endosperm extracts was absent in su2-2279 or su2-5178 mutants, indicating that SSIIa is active in the soluble phase during kernel development. The immediate structural effect of the su2- mutations was shown to be increased abundance of short glucan chains in amylopectin and a proportional decrease in intermediate length chains, similar to the effects of **SSII** deficiency in other species.

=> d 5 so

L3 ANSWER 5 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3
SO Plant molecular biology, 2004 Apr. Vol. 54, no. 6 p. 865-879
ISSN: 0167-4412

=> d 7 ab

L3 ANSWER 7 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
AB Starch synthases contribute to the elongation of glucan chains during starch synthesis, and therefore their characteristics are one of the dominant factors influencing the fine structure of starch. To understand the detailed properties of starch synthases in kidney bean (Phaseolus vulgaris L.) seeds, a **cDNA** clone (pvss 22) for **starch synthase II** was isolated from developing seeds at the late stage by the combinations of reverse transcriptase-mediated PCR (RT-PCR), 5'-RACE (rapid amplification of **cDNA** end), and 3'-RACE. The pvss 22 **cDNA** is 2486 bp in length and contains an open reading frame of 738 amino acids. The predicted amino acid sequence of the protein (designated PvSSII-2) encoded by pvss22 **cDNA** displayed substantial identity (more than 58%) to other dicot **starch synthase II** members. RNA gel blot anal. revealed that the pvss22 transcripts predominantly accumulate in developing seeds at the middle to late stages. The recombinant PvSSII-2 protein was produced as a major polypeptide in inclusion bodies of Escherichia coli cells. The antiserum raised against proteins extracted from the inclusion bodies recognized at least seven polypeptides in starch-granule fractions from seeds. Analyses of N-terminal sequences of starch-granule-bound proteins showed that three of the seven polypeptides reacting with the antiserum are encoded by the pvss22 **gene**.

=> d so

L3 ANSWER 1 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
SO PCT Int. Appl., 132 pp.
CODEN: PIXXD2

=> d 7 so

L3 ANSWER 7 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
SO Journal of Applied Glycoscience (2004), 51(2), 101-107
CODEN: JAGLFX; ISSN: 1344-7882

=> d 8 ab

L3 ANSWER 8 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
AB To elucidate the roles of the isogenes encoding starch synthase (EC 2.4.1.21) in rice (Oryza sativa L.), a comprehensive expression anal. of the **gene** family was conducted. Extensive searches for starch synthase genes were done in the databases of both the whole genome and full-length cDNAs of rice, and ten genes were revealed to comprise the starch synthase **gene** family. Multi-sequence alignment anal. of the starch synthase proteins from rice and other plant species suggested that they were grouped into five classes, soluble starch synthase I (SSI), **SSII**, SSIII, SSIV and granule-bound starch synthase (GBSS). In rice, there was one **gene** for SSI, three for **SSII** and two each for SSIII, IV and GBSS. The expression pattern of the ten genes in the developing caryopsis was examined by semi-quant. RT-PCR anal. Based on the temporal expression patterns, the ten genes could be divided into three groups: (i) early expressers (**SSII**-2, III-1, GBSSII), which are expressed in the early stage of grain filling; (ii) late expressers (**SSII**-3, III-2, GBSSI), which are expressed in the mid to later stage of grain filling; and (iii) steady expressers (SSI, II-1, IV-1, IV-2), which are expressed relatively constantly during grain filling. Within a caryopsis, the three **gene** groups spatially share their expression, i.e. "early expressers" in the pericarp, the "late expressers" in the endosperm" and the "steady expressers" in both tissues. In addition, this grouping was reflected in the expression pattern of various rice tissues: expression in non-endosperm, endosperm or all tissues examined The implications in this spatio-temporal work sharing of starch synthesis isogenes are discussed.

=> d 8 so

L3 ANSWER 8 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
SO Planta (2004), 220(1), 9-16
CODEN: PLANAB; ISSN: 0032-0935

=> d 9 ab

L3 ANSWER 9 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
AB There is now evidence for the existence of two somatostatin genes in most vertebrate species, and even three somatostatin genes in teleosts. To help clarify the evolutionary relationships between the different somatostatin isoforms currently known, we characterized the somatostatin loci in a teleost species, the zebrafish Danio rerio, and compared them with the corresponding regions in the human and pufferfish genomes. The occurrence of three somatostatin genes, termed SS1, SS2 and **SSII** , has been previously demonstrated in the zebrafish. Radiation hybrid mapping assigned these three genes to linkage groups 15, 23 and 2, resp. Conserved synteny of the zebrafish SS2 **gene** and the human cortistatin **gene** was revealed by comparative genomic anal., indicating that mammalian cortistatin is orthologous to the SS2 variant of non-mammalian species. In contrast, using a similar approach, it was not possible to identify the evolutionary relationships between the atypical **SSII gene** of zebrafish and the other teleost **SSII** genes.

=> d 9 so

L3 ANSWER 9 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
SO Journal of Molecular Endocrinology (2004), 33(3), R1-R8

CODEN: JMLEEI; ISSN: 0952-5041

=> d 10 ab

L3 ANSWER 10 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
AB The maize **gene** dull1 (du1) of the present invention is a determinant of the structure of endosperm starch. Mutations of du1 affect the activity of at least two enzymes involved in starch biosynthesis, namely the starch synthase, **SSII**, and the starch branching enzyme, SBEIIa. Du1 codes for a predicted 1674 residue protein, and is expressed with a unique temporal pattern in endosperm but is undetectable in leaf or root. The size of the Du1 product and its expression pattern match precisely the known characteristics of maize **SSII**. The Du1 product contains two different repeated regions in its unique amino terminus, one of which is identical to a conserved segment of the starch debranching enzymes. The **cDNA** provided for in the present invention encodes **SSII**, and mutations within this **gene** affect multiple aspects of starch biogenesis by disrupting an enzyme complex containing starch synthase(s), starch branching enzyme(s), and possibly starch debranching enzyme.

=> d 10 so

L3 ANSWER 10 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
SO U.S., 56 pp., Cont.-in-part of U.S. Ser. No. 968,542.
CODEN: USXXAM

=> d 10 pi

L3 ANSWER 10 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6639125	B1	20031028	US 2000-554467	20000512
	US 5981728	A	19991109	US 1997-968542	19971112
	WO 9924575	A1	19990520	WO 1998-US24225	19981112
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2004049810	A1	20040311	US 2003-634262	20030805

=> d 11-20 ti

L3 ANSWER 11 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI Effect of temperature on expression of genes encoding enzymes for starch biosynthesis in developing wheat endosperm.

L3 ANSWER 12 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
TI Map-based cloning of the ALK **gene**, which controls the gelatinization temperature of rice

L3 ANSWER 13 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7
TI Cloning and characterization of the granule-bound **starch**

synthase II gene in rice: **gene** expression is regulated by the nitrogen level, sugar and circadian rhythm

L3 ANSWER 14 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
TI Toxicity of Bacillus sphaericus LP1-G against susceptible and resistant Culex quinquefasciatus and the cloning of the mosquitocidal toxin **gene**

L3 ANSWER 15 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Chemical synthesis of methyl 6'-alpha-maltosyl-alpha-maltotrioside and its use for investigation of the action of **starch synthase II**.

L3 ANSWER 16 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
TI The structural organisation of the **gene** encoding class II starch synthase of wheat and barley and the evolution of the genes encoding starch synthases in plants

L3 ANSWER 17 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Expression of mosquitocidal mtx1 toxin **gene** in Bacillus sphaericus in crystal-minus B.thuringiensis subsp. israelensis

L3 ANSWER 18 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Akt2 mimics insulin and phosphorylates SRp40, a serine/arginine (SR)-rich RNA binding protein, in vivo to regulate protein kinase C betaII exon inclusion.

L3 ANSWER 19 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Mutations in **starch synthase II** resulting in reduced amylopectin content and higher dietary fiber of grain

L3 ANSWER 20 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Caryopsis-specific promoter of wheat for use in tissue-specific expression of foreign genes in cereal

=> d 11 ab

L3 ANSWER 11 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN

=> d 11 so

L3 ANSWER 11 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
SO Plant science, May 2003. Vol. 164, No. 5. p. 873-881
Publisher: Oxford, UK : Elsevier Science Ltd.
CODEN: PLSCE4; ISSN: 0168-9452

=> d 12 ab

L3 ANSWER 12 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
AB Gelatinization temperature (GT) is an important parameter for evaluating the cooking and eating quality of rice besides amylose content (AC). The inheritance of the genes affecting GT has been widely studied and is considered to be controlled by a major **gene**. Here, we report

the map-based cloning of rice ALK that encodes the soluble **starch synthase II** (SSSII). Comparison between the DNA sequences from different, rice varieties, together with the results obtained with digestion of the rice seeds in alkali solution, indicates that the base substitutions in coding sequence of ALK may cause the alteration in GT.

=> d 12 so

L3 ANSWER 12 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
SO Science in China, Series C: Life Sciences (2003), 46(6), 661-668
CODEN: SCCLFO; ISSN: 1006-9305

=> d 21-30 ti

L3 ANSWER 21 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Transgenic plant expressing new starch branching enzyme IIb (BEIIb) from wheat and its use for improvement of food and non food product quality

L3 ANSWER 22 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Cold adaptation of a mesophilic subtilisin-like protease by laboratory evolution.

L3 ANSWER 23 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Directed evolution study of temperature adaptation in a psychrophilic enzyme.

L3 ANSWER 24 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Wheat granule-bound starch synthase I and II are encoded by separate genes that are expressed in different tissues.

L3 ANSWER 25 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
TI Purification and characterization of soluble starch synthases from maize endosperm

L3 ANSWER 26 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Maize starch synthase **gene** du1 and uses in starch production

L3 ANSWER 27 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Dull1 coding for a novel starch synthase and uses thereof.

L3 ANSWER 28 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 11
TI Molecular cloning of an apoptosis-inducing protein, pierisin, from cabbage butterfly: possible involvement of ADP-ribosylation in its activity.

L3 ANSWER 29 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Conserved mechanism of PLAG1 activation in salivary gland tumors with and without chromosome 8q12 abnormalities: identification of **SSII** as a new fusion partner **gene**

L3 ANSWER 30 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Plant-like starches and the method of making them in hosts

=> d 31-40 ti

L3 ANSWER 31 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 12
(2005) on STN
TI Isolation and characterization of the zSSIIa and zSSIIb starch synthase **cDNA** clones from maize endosperm.

L3 ANSWER 32 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 13
(2005) on STN
TI Mutations in the **gene** encoding **starch synthase II** profoundly alter amylopectin structure in pea embryos.

L3 ANSWER 33 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 14
(2005) on STN
TI Characterization of dull1, a maize **gene** coding for a novel starch synthase.

L3 ANSWER 34 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Cloning and **cDNA** sequence of starch branching enzyme II of potato and its use for modification of branching in amylopectin starch

L3 ANSWER 35 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
TI **Gene** from tropical Bacillus sphaericus encoding a protease closely related to subtilisins from Antarctic bacilli

L3 ANSWER 36 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Soluble **starch synthase II** activity is required for the building of the amylopectin crystal in Chlamydomonas reinhardtii.

L3 ANSWER 37 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 16
(2005) on STN
TI Unusual amino acid determinants of host range in the Mtx2 family of mosquitocidal toxins.

L3 ANSWER 38 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 17
(2005) on STN
TI New **gene** from nine Bacillus sphaericus strains encoding highly conserved 35.8-kilodalton mosquitocidal toxins.

L3 ANSWER 39 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 18
(2005) on STN
TI Evidence that a 77-kilodalton protein from the starch of pea embryos is an isoform of starch synthase that is both soluble and granule bound.

L3 ANSWER 40 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 19
(2005) on STN
TI A Bacillus sphaericus **gene** encoding a novel type of mosquitocidal toxin of 31.8 of kDA.

=> d 41-50 ti

L3 ANSWER 41 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Three isoforms of starch synthase and two isoforms of branching enzyme are present in potato tuber starch

L3 ANSWER 42 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Biochemical characterization and molecular cloning of starch synthase I from maize endosperm

L3 ANSWER 43 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Bacillus sphaericus **gene** mtx toxin expression and use as mosquito larva insecticide

L3 ANSWER 44 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 20
(2005) on STN
TI Biochemical and molecular characterization of a novel starch synthase from potato tubers.

L3 ANSWER 45 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 21
TI Starch branching enzymes belonging to distinct enzyme families are differentially expressed during pea embryo development

L3 ANSWER 46 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 22
(2005) on STN
TI Expression of mosquitocidal toxin genes in a gas-vacuolated strain of Ancylobacter aquaticus.

L3 ANSWER 47 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Transgenic Caulobacter expressing genes for Bacillus toxins as pesticides

L3 ANSWER 48 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 23
(2005) on STN
TI Toward an understanding of the biogenesis of the starch granule. Evidence that Chlamydomonas soluble **starch synthase II** controls the synthesis of intermediate size glucans of amylopectin.

L3 ANSWER 49 OF 58 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Cytotoxicity and ADP-ribosylating activity of the mosquitocidal toxin from Bacillus sphaericus **SSII**-1: Possible roles of the 27- and 70-kilodalton peptides.

L3 ANSWER 50 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Bacteriocin production by Bacillus sphaericus

=> d 51-58 ti

L3 ANSWER 51 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 24
(2005) on STN
TI Expression of the mosquitocidal toxins of Bacillus sphaericus and Bacillus thuringiensis subsp. israelensis by recombinant Caulobacter crescentus, a vehicle for biological control of aquatic insect larvae.

L3 ANSWER 52 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Manufacture of insecticidal proteins with caulobacters

L3 ANSWER 53 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 25
(2005) on STN
TI Cloning, sequencing, and expression of a **gene** encoding a 100-kilodalton mosquitocidal toxin from Bacillus sphaericus **SSII** -1.

L3 ANSWER 54 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 26
TI Comparison of soluble starch synthases and branching enzymes from leaves and kernels of normal and amylose-extender maize

L3 ANSWER 55 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 27
TI Biocide **gene**(s) and biocidal activity in different strains of Bacillus sphaericus. Expression of the **gene**(s) in E. coli maxicells

L3 ANSWER 56 OF 58 CAPLUS COPYRIGHT 2005 ACS on STN
TI Evidence for independent genetic control of the multiple forms of maize endosperm branching enzymes and starch synthases

L3 ANSWER 57 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN
TI Molecular cloning and expression analysis of three genes encoding **starch synthase II** in rice.

L3 ANSWER 58 OF 58 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN
TI Cloning and characterization of the granule-bound **starch synthase II gene** in rice: **gene** expression is regulated by the nitrogen level, sugar and circadian rhythm.

=> s ((morell m?) or (morell, m?))/au
L4 446 ((MORELL M?) OR (MORELL, M?))/AU

=> s l4 and (starch synthase or starch synthase ii or ssii)
L5 41 L4 AND (STARCH SYNTHASE OR STARCH SYNTHASE II OR SSII)

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 25 DUP REM L5 (16 DUPLICATES REMOVED)

=> d 1-10 ti

L6 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat with altered branching enzyme activity and starch and starch containing products derived thereform

L6 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
TI Protein phosphorylation in amyloplasts regulates starch branching enzyme activity and protein-protein interactions

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Detailed comparison between the wheat chromosome group 7 short arms and the rice chromosome arms 6S and 8L with special reference to genes involved in starch biosynthesis

L6 ANSWER 4 OF 25 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI From bacterial glycogen to starch: Understanding the biogenesis of the plant starch granule.

L6 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Advances in the understanding of starch synthesis in wheat and barley

L6 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Engineering of amylopectin biosynthesis in rice endosperm

L6 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
TI Barley sex6 mutants lack **starch synthase** IIa activity and contain a starch with novel properties

L6 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
TI The structural organisation of the gene encoding class II **starch synthase** of wheat and barley and the evolution of the genes encoding starch synthases in plants

L6 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Mutations in **starch synthase II** resulting in reduced amylopectin content and higher dietary fiber of grain

L6 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Use of perfect markers in wheat quality research and breeding

=> d 1 ab

L6 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
AB Wheat having a reduced level of SBEIIa activity, that may have a relative high amylose content. Wheat having a mutant SBEIIa gene in the A genome. The wheat might addnl. have reduced levels of SBEIIb activity. The wheat grain of this invention can be of a non-shrunken phenotype despite a lesion in the amylopectin synthesis pathway, and may also have a high relative amylose content.

=> d so

L6 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
SO PCT Int. Appl., 132 pp.
CODEN: PIXXD2

=> d pi

L6 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005001098	A1	20050106	WO 2004-AU901	20040630

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

=> d 2 ab

L6 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AB Protein phosphorylation in amyloplasts and chloroplasts of Triticum aestivum (wheat) was investigated after the incubation of intact plastids with γ-32P-ATP. Among the soluble phosphoproteins detected in plastids, three forms of starch branching enzyme (SBE) were phosphorylated in amyloplasts (SBEI, SBEIIa, and SBEIIb), and both forms of SBE in chloroplasts (SBEI and SBEIIa) were shown to be phosphorylated after sequencing of the immunopptd. 32P-labeled phosphoproteins using quadrupole-orthogonal acceleration time of flight mass spectrometry. Phosphoamino acid anal. of the phosphorylated SBE forms indicated that the proteins are all phosphorylated on Ser residues. Anal. of starch granule-associated phosphoproteins after incubation of intact amyloplasts with γ-32P-ATP indicated that the granule-associated forms of SBEII and two granule-associated forms of **starch synthase** (SS) are phosphorylated, including SSIIa. Measurement of SBE activity in amyloplasts and chloroplasts showed that phosphorylation activated SBEIIa (and SBEIIb in amyloplasts), whereas dephosphorylation using alkaline phosphatase reduced the catalytic activity of both enzymes. Phosphorylation and dephosphorylation had no effect on the measurable activity of SBEI in amyloplasts and chloroplasts, and the activities of both granule-bound forms of SBEII in amyloplasts were unaffected by dephosphorylation. Immunopptn. expts. using peptide-specific anti-SBE antibodies showed that SBEIIb and starch phosphorylase each coimmuno-precipitated with SBEI in a phosphorylation-dependent manner, suggesting that these enzymes may form protein complexes within the amyloplast in vivo. Conversely, dephosphorylation of immunopptd. protein complex led to its disassembly. This article reports direct evidence that enzymes of starch metabolism (amylopectin synthesis) are regulated by protein phosphorylation and indicate a wider role for protein phosphorylation and protein-protein interactions in the control of starch anabolism and catabolism.

=> d 2 so

L6 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
SO Plant Cell (2004), 16(3), 694-708
CODEN: PLCEEW; ISSN: 1040-4651

=> d 3 ab

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
AB Rice bacterial artificial chromosome (BAC) clones have been identified that contain sequences orthologous to each EST localized to wheat chromosome 7AS deletion stocks by Southern blot hybridization. This information has been used to relate the DNA sequence included in each wheat deletion stock to a complement of rice BACs. A virtual contig was used that covered 90 cM (21 Mb) of DNA sequence (with a gap for the 6S/8L junction). Comparison of the positions of orthologous genes on the rice virtual contig and on wheat chromosome 7AS showed that there was an unexpectedly low level of synteny (31.4) and a high level of chromosome rearrangements (68.6). The non-syntenous loci were of two classes: wheat and rice genes found at different locations in the genome (32.6), and ESTs in wheat not present in rice (36.0). Four starch synthetic genes, GBSSI, SSI, SSIIa and DBEI, were located at similar positions on wheat chromosome 7AS and the virtual rice contig covering wheat chromosome 7AS. A preliminary comparison between the short arms of chromosome 7A and 7D in wheat showed that both chromosomes had a similar level of sequence synteny with rice. Therefore, there appears to be considerable variation in gene

order between wheat chromosome 7S and rice chromosome 6S and 8L.

=> d 3 so

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
SO Functional & Integrative Genomics (2004), 4(4), 231-240
CODEN: FIGUBY; ISSN: 1438-793X

=> d 11-20 ti

L6 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Transgenic plant expressing new starch branching enzyme IIb (BEIIb) from wheat and its use for improvement of food and non food product quality

L6 ANSWER 12 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 4
(2005) on STN
TI Development of robust PCR-based DNA markers for each homoeo-allele of granule-bound **starch synthase** and their application in wheat breeding programs.

L6 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
TI Genetic mapping of commercially significant starch characteristics in wheat crosses

L6 ANSWER 14 OF 25 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Wheat starch biosynthesis.

L6 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat starch synthases and cDNAs and genes and uses in plant breeding and alteration of plant starch composition or content

L6 ANSWER 16 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 6
(2005) on STN
TI The structure and expression of the wheat **starch synthase** III gene. Motifs in the expressed gene define the lineage of the **starch synthase** III gene family.

L6 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
TI Starch biosynthesis genes from Triticum tauschii and their use to regulate gene expression in plants

L6 ANSWER 18 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 7
(2005) on STN
TI Cloning and characterization of a gene encoding wheat **starch synthase** I.

L6 ANSWER 19 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 8
(2005) on STN
TI The localization and expression of the class II starch synthases of wheat.

L6 ANSWER 20 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

DUPLICATE 9
(2005) on STN
TI Novel, starch-like polysaccharides are synthesized by an unbound form of granule-bound **starch synthase** in glycogen-accumulating mutants of Chlamydomonas reinhardtii.

=> d 11 ab

L6 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
AB This invention relates to a new starch branching enzyme (BEIIb), and to the gene encoding the enzyme. In particular, the invention provides a new starch branching enzyme type II from wheat, the nucleic acid encoding the enzyme, and constructs comprising the nucleic acid. The invention provides a detailed anal. of wheat BEIIb gene and showed the gene is expressed at low level in th soluble fraction of the wheat endosperm, and is predominantly found within the starch granule. The invention also relates to a novel method for identification of branching enzyme type II proteins, which is useful for screening wheat germplasm for null or altered alleles of wheat branching enzyme IIb. The novel gene, protein and methods of the invention are useful in production of plants which produce grain with novel properties for food and industrial applications, for example wheat grain containing high amylose or low amylopectin starch.

=> d 11 so

L6 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2

=> d 11 pi

L6 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001062934	A1	20010830	WO 2001-AU175	20010221
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2400710	AA	20010830	CA 2001-2400710	20010221
	EP 1263961	A1	20021211	EP 2001-907236	20010221
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003523773	T2	20030812	JP 2001-562708	20010221
	NZ 520904	A	20040625	NZ 2001-520904	20010221

=> d 12 ab

L6 ANSWER 12 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
DUPLICATE 4
(2005) on STN

=> d 12 so

L6 ANSWER 12 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4

SO Australian journal of agricultural research, 2001. Vol. 52, No. 11/12. p. 1409-1416
Publisher: Collingwood, Victoria, Australia : CSIRO.
CODEN: AJAEA9; ISSN: 0004-9409
Gov. Source: Federal

=> d 14 ab

L6 ANSWER 14 OF 25 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB Starch biosynthesis in plants involves the concerted action of a number of enzymes, including ADPglucose pyrophosphorylase, starch synthases, branching enzymes and debranching enzymes. We report on the cloning and characterisation of genes encoding these enzymes from wheat and on their chromosomal locations. The prospects for manipulating wheat starch structure and functionality using these genes is discussed.

=> d 13 ab

L6 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

AB Starch properties were measured on the doubled haploid progeny of 2 crosses, one between Cranbrook and Halberd and the other between CD87 and Katepwa. Properties studied included starch peak and final viscosity measured by Rapid Visco Analyzer, starch granule size distribution measured by laser light scattering, starch gelatinisation temperature by differential scanning calorimetry, and flour swelling volume In the Cranbrook x Halberd cross (samples from 2 environments), a highly significant quant. trait locus (QTL) was located on chromosome 4A for both starch peak viscosity and starch/flour swelling volume, centered around the Wx-B1 locus. In previous studies, this locus has been found to be linked to Japanese noodle quality. The increases in starch peak viscosity and flour swelling volume are derived from the Halberd parent, consistent with the fact that Halberd is null for the Wx-B1 locus on chromosome 4A and is missing the resp. granule-bound **starch synthase** protein, whereas Cranbrook is a wheat line carrying the normal 3 Wx loci. The final starch viscosity also showed an association with the Wx-B1 locus. In the CD87 Katepwa cross, the progeny showed an association between peak viscosity and a marker on chromosome 7A. This appeared to be near the Wx-A1 locus. In some expts., flour viscosity showed a highly significant QTL on chromosome 7B, apparently at the same locus as the late maturity α-amylase derived from the Cranbrook parent. Starch gelatinisation onset temperature indicated a significant QTL on chromosomes 2B and 7A (LOD = 2.58 and 3.66, resp., in interval analyses). Starch gelatinisation peak temps. indicated a QTL on chromosome 7A, which, although not in the significant (P = 0.05) class based on regression analyses, indicated a LOD score of 3.06 in interval analyses. Heat of gelatinisation (ΔH) indicated a suggestive QTL (LRS = 14.5 with a threshold of 14.7 for P < 0.05, LOD = 2.65 for interval anal.), on chromosome 4A, at the Wx-B1 locus with an increased effect coming from the Halberd parent. The A:B granule ratio anal. indicated a significant QTL on chromosome 4B, but this was not observed in all environments and may be due to the fact that the QTL corresponded to the position of a major QTL controlling plant growth.

=> d 13 so

L6 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

SO Australian Journal of Agricultural Research (2001), 52(11&12), 1287-1296

CODEN: AJAEA9; ISSN: 0004-9409

=> d 21-25 ti

L6 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
TI A single genetic locus associated with starch granule properties and noodle quality in wheat

L6 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 11
TI The major proteins of wheat endosperm starch granules

L6 ANSWER 23 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI The biochemistry and molecular biology of starch synthesis in cereals.

L6 ANSWER 24 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI Protein phosphorylation in amyloplasts regulates starch branching enzyme activity and protein-protein interactions.

L6 ANSWER 25 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI Barley sex6 mutants lack **starch synthase** IIa activity and contain a starch with novel properties.

=> s ((li z?) or (li, z?))/au
L7 27619 ((LI Z?) OR (LI, Z?))/AU

=> s l7 and (starch synthase or starch synthase II or ssii)
L8 21 L7 AND (STARCH SYNTHASE OR STARCH SYNTHASE II OR SSII)

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9 12 DUP REM L8 (9 DUPLICATES REMOVED)

=> d 1-12 ti

L9 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat with altered branching enzyme activity and starch and starch containing products derived thereform

L9 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
TI Detailed comparison between the wheat chromosome group 7 short arms and the rice chromosome arms 6S and 8L with special reference to genes involved in starch biosynthesis

L9 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
TI Advances in the understanding of starch synthesis in wheat and barley

L9 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
TI Barley sex6 mutants lack **starch synthase** IIa activity and contain a starch with novel properties

L9 ANSWER 5 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

(2005) on STN DUPLICATE 2
TI The structural organisation of the gene encoding class II **starch synthase** of wheat and barley and the evolution of the genes encoding starch synthases in plants.

L9 ANSWER 6 OF 12 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Wheat starch biosynthesis.

L9 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat starch synthases and cDNAs and genes and uses in plant breeding and alteration of plant starch composition or content

L9 ANSWER 8 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 3
(2005) on STN
TI The structure and expression of the wheat **starch synthase** III gene. Motifs in the expressed gene define the lineage of the **starch synthase** III gene family.

L9 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
TI Starch biosynthesis genes from Triticum tauschii and their use to regulate gene expression in plants

L9 ANSWER 10 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 4
(2005) on STN
TI Cloning and characterization of a gene encoding wheat **starch synthase** I.

L9 ANSWER 11 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 5
(2005) on STN
TI The localization and expression of the class II starch synthases of wheat.

L9 ANSWER 12 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN
TI Barley sex6 mutants lack **starch synthase** IIa activity and contain a starch with novel properties.

=> s ((rahman, s?) or (rahman s?))/au
L10 1706 ((RAHMAN, S?) OR (RAHMAN S?))/AU

=> s l10 and (starch synthase or ssii)
L11 32 L10 AND (STARCH SYNTHASE OR SSII)

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12 18 DUP REM L11 (14 DUPLICATES REMOVED)

=> d 1-10 ti

L12 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat with altered branching enzyme activity and starch and starch containing products derived thereform

L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Detailed comparison between the wheat chromosome group 7 short arms and

the rice chromosome arms 6S and 8L with special reference to genes involved in starch biosynthesis

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Advances in the understanding of starch synthesis in wheat and barley

L12 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Engineering of amylopectin biosynthesis in rice endosperm

L12 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
TI Barley sex6 mutants lack **starch synthase** IIa activity and contain a starch with novel properties

L12 ANSWER 6 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 2 (2005) on STN
TI The structural organisation of the gene encoding class II **starch synthase** of wheat and barley and the evolution of the genes encoding starch synthases in plants.

L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Transgenic plant expressing new starch branching enzyme IIb (BEIIb) from wheat and its use for improvement of food and non food product quality

L12 ANSWER 8 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Wheat starch biosynthesis.

L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat starch synthases and cDNAs and genes and uses in plant breeding and alteration of plant starch composition or content

L12 ANSWER 10 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 3 (2005) on STN
TI The structure and expression of the wheat **starch synthase** III gene. Motifs in the expressed gene define the lineage of the **starch synthase** III gene family.

=> d 11-18 ti

L12 ANSWER 11 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 4 (2005) on STN
TI The genes encoding granule-bound starch synthases at the waxy loci of the A, B, and D progenitors of common wheat.

L12 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
TI Starch biosynthesis genes from Triticum tauschii and their use to regulate gene expression in plants

L12 ANSWER 13 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. DUPLICATE 5 (2005) on STN
TI Cloning and characterization of a gene encoding wheat **starch synthase** I.

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of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 6
TI The localization and expression of the class II starch synthases of wheat.

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(2005) on STN DUPLICATE 7
TI Identification and characterization of U.S. wheats carrying null alleles at the wx loci.

L12 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
TI The major proteins of wheat endosperm starch granules

L12 ANSWER 17 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN
TI The biochemistry and molecular biology of starch synthesis in cereals.

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(2005) on STN
TI Barley sex6 mutants lack **starch synthase** IIa activity
and contain a starch with novel properties.

=> s ((appels, r?) or (appels r?))/au
L13 477 ((APPELS, R?) OR (APPELS R?))/AU

=> s l13 and (starch synthase or ssii)
L14 31 L13 AND (STARCH SYNTHASE OR SSII)

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15 14 DUP REM L14 (17 DUPLICATES REMOVED)

=> d 1-14 ti

L15 ANSWER 1 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Impact of biotechnology on the production of improved cereal varieties.

L15 ANSWER 2 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2005) on STN DUPLICATE 1
TI Application of a high-throughput antibody-based assay for identification of the granule-bound **starch synthase** Wx-B1b allele in Australian wheat lines.

L15 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
TI Development of robust PCR-based DNA markers for each homoeo-allele of granule-bound **starch synthase** and their application in wheat breeding programs

L15 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
TI Genetic mapping of commercially significant starch characteristics in wheat crosses

L15 ANSWER 5 OF 14 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Wheat starch biosynthesis.

L15 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
TI Wheat starch synthases and cDNAs and genes and uses in plant breeding and alteration of plant starch composition or content

L15 ANSWER 7 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4
TI The structure and expression of the wheat **starch synthase** III gene. Motifs in the expressed gene define the lineage of the **starch synthase** III gene family.

L15 ANSWER 8 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 5
TI The genes encoding granule-bound starch synthases at the waxy loci of the A, B, and D progenitors of common wheat.

L15 ANSWER 9 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 6
TI Cloning and characterization of a gene encoding wheat **starch synthase** I.

L15 ANSWER 10 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 7
TI The localization and expression of the class II starch synthases of wheat.

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TI A PCR-based marker for selection of starch and potential noodle quality in wheat.

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TI A single genetic locus associated with starch granule properties and noodle quality in wheat.

L15 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
TI The major proteins of wheat endosperm starch granules

L15 ANSWER 14 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI The biochemistry and molecular biology of starch synthesis in cereals.